

THE CLAIMS

What is claimed is:

- 5 1. A semiconductor process system adapted for processing of or with a material
 therein, said system comprising:
 - a sampling region for the material;
 - an infrared radiation source constructed and arranged to transmit infrared
 radiation through the sampling region;
- 10 a thermopile detector constructed and arranged to receive infrared radiation after
 the transmission thereof through the sampling region and to responsively generate an
 output signal correlative of said material; and
 - process control means arranged to receive the output of the thermopile detector
 and to responsively control one or more process conditions in and/or affecting the
 semiconductor process system.
- 15 2. The semiconductor process system of claim 1, wherein the material comprises a
 solid.

3. The semiconductor process system of claim 1, wherein the material comprises a fluid.
4. The semiconductor process system of claim 1, wherein the material comprises a liquid.
5. The semiconductor process system of claim 1, wherein the material comprises a gas.